

Kelp (Calico) Bass (*Paralabrax clathratus*)

Status of the Population:

Kelp bass are taken only by sport anglers. Since the 1960's, the catch has fluctuated greatly. In the 1970s and 1980s, the kelp bass was among the top three species taken by the average angler per hour of fishing (along with barred sand bass and Pacific mackerel) (Oliphant et al. 1990). In 1986 and 1989, kelp bass were the most commonly taken species in the Commercial Passenger Fishing Vessel (CPFV) fleet. Throughout the 1980s, kelp bass have consistently ranked among the top five fishes caught by CPFV anglers (Oliphant et al. 1990). Department surveys indicate the estimated total catches of kelp bass have increased since the mid-1970s. Low periods of kelp bass landings in the mid-1970s and early-1980s may be attributed to El Niño events that provide anglers with alternative species to catch. Peak landings have followed each El Niño event. Department surveys of the CPFV industry in the 1970s and 1980s indicated a stable spawning population was being maintained because of the large number of age classes that are caught and kept by anglers (Ally et al. 1991). The recent Federal Marine Recreational Fishery Statistics Survey estimated that since 1990 the catch from shore, pier, and private boat anglers averages about 900,000 kelp bass per year which exceeds that of CPFV fishermen (about 800,000 fish per year). The CPFV landings of kelp bass fluctuated, with a general declining trend from 1993 to 1999. In 2000 and 2001 landings rebounded to previous levels. While this is not a direct measure of abundance, catches trends offer some insight into the overall health of a stock. Kelp bass stocks are believed to be stable. The current regulations appear to be maintaining adequate recruitment. However, heavy fishing pressure results in few fish surviving beyond the 12 inch size limit, such that "trophy" sized fish are rare in most areas.

Home Range/Migratory Patterns:

Kelp bass have ranged historically as far north as the mouth of the Columbia River and south to Bahia Magdalena, Baja California. However, they are rare north of Point Conception. They are abundant in southern California waters including all the Channel Islands. They are typically found in shallow water to 150 feet, and are closely associated with high relief structure, including kelp beds. Recent studies have shown that some kelp bass may move in excess of 50 miles (Love et al. 1996).

Current Regulations:

No commercial is take allowed.

Recreational minimum size limit is 12" total length, Possession limit is 10 in combination of kelp bass, barred sand bass and spotted sand bass.

Current regulations appear generally effective in maintaining a stable population.

How MPAs May Help:

The kelp bass is a top predator in the nearshore reef/kelp community. The effect of removing larger individuals from this nearshore ecosystem is not fully understood, but is likely significant. The abundances and balance of other species in this system might change in ways we cannot presently predict with any certainty. Since such reserves would protect other exploited species as well, the ecosystem functions of kelp bass might be altered as a result of more intense competition and predator/prey interactions. Similarly, reserves would also protect habitats valuable to kelp bass from a variety of potential fishing activity related impacts.

Studies on kelp bass in existing small MPAs at Catalina and Anacapa Islands, and La Jolla have shown that size and abundance of kelp bass are higher inside the reserves than outside (Beers and Ambrose In Prep). It can be anticipated that relatively large reserves will allow for an increase in numbers and sizes of kelp bass within the reserves.

Relatively large sized reserves can act to assure the continuing health of the kelp bass population if changes in exploitation levels occur, or if unforeseen environmental fluctuations result in a significant decline and sustainability of stocks. This insurance scenario would require that some significant portion of the stock is placed under reserve protection.

It would be expected that large MPAs would protect populations of large adult kelp bass that have significantly higher reproductive potential than smaller individuals. However, since there does not appear to be a deficit in recruitment potential under present management, any potential benefit through increased larval reproduction might be outweighed by the loss to the fishery from closing large areas of fishing grounds.

Studies have indicated that kelp bass may travel as far as 50 miles. This would suggest that while a large reserve would be needed to protect all members of an intact population, some portion of the population might be expected to occasionally move outside the reserve, providing added kelp bass to the fishery in adjacent areas.